

What is claimed is:

1. An electrooptical display device comprising:

at least one substrate;

5 a first electrode on said substrate;

a texture body on said first electrode;

a light reflection film on said texture body formed of a material having a higher refractive index than that of said texture body;

10 an electrooptical material over said light reflection film; and

a second electrode for applying an electric field on said electrooptical material;

2. A device according to claim 1, wherein said texture body has on its surface an uneven portion for scattering light, said uneven portion being 1  $\mu\text{m}$  or less in height.

3. A device according to claim 1, wherein said light reflection film is flat and an uneven portion of said light reflection film is 0.3  $\mu\text{m}$  or less in height.

4. A device according to claim 1, further comprising an interlayer insulating film under said texture body, said interlayer insulating film being flat with an uneven portion of said interlayer insulating film being 0.3  $\mu\text{m}$  or less in height.

5. A device according to claim 1, wherein said first electrode is formed of a material selected from the group consisting of aluminum, a material with a main component thereof being aluminum, silver, and a material with a main component thereof being silver.

6. A device according to claim 1, wherein said electrooptical

material is formed of a liquid crystal material selected from the group consisting of a nematic, a smectic, and a cholesteric liquid crystal materials.

5        7. A device according to claim 1, wherein, in the case where the film thickness and the refractive index of said texture body are  $d_1$  and  $n_1$ , respectively, the film thickness  $d_1$  is adjusted to satisfy  $300 \text{ nm} \leq \lambda \leq 800 \text{ nm}$  (wherein  $\lambda = 4n_1d_1$ ) in a part of or substantially all over said texture body.

10        8. A device according to claim 1, wherein, in the case where the film thickness and the refractive index of said light reflection film are  $d_2$  and  $n_2$ , respectively, the film thickness  $d_2$  is adjusted to satisfy  $300 \text{ nm} \leq \lambda \leq 800 \text{ nm}$  (wherein  $\lambda = 4n_2d_2$ ) in a part of or substantially all over said light reflection film.

15        9. A device according to claim 1, wherein said texture body is formed of a material selected from the group consisting of  $\text{SiO}_2$ ,  $\text{MgF}_2$ ,  $\text{Na}_3\text{AlF}_6$ , an acrylic resin, and polyimide.

20        10. A device according to claim 1, wherein said light reflection film is formed of a material selected from the group consisting of  $\text{TiO}_2$ ,  $\text{ZrO}_2$ ,  $\text{Ta}_2\text{O}_5$ ,  $\text{ZnS}$ ,  $\text{ZnSe}$ ,  $\text{ZnTe}$ ,  $\text{Si}$ ,  $\text{Ge}$ ,  $\text{Y}_2\text{O}_3$ ,  $\text{Al}_2\text{O}_3$ , and Indium Tin Oxide.

25        11. A device according to claim 1, wherein said electrooptical display device is a reflection type display device.

12. An electrooptical display device comprising:

30        a first substrate formed of a semiconductor substrate or an insulating substrate;

      a second substrate formed of a transparent substrate; and

      a liquid crystal between said first and second substrates,

wherein said further comprises a first electrode formed of a metal material, a texture body formed of a material having a refractive index of 1.7 or less, and a light reflection film formed of a material having a higher refractive index than that of said texture body are provided on said first substrate, and

wherein a second electrode formed of a transparent material is provided on said second substrate.

13. A device according to claim 12, wherein said texture body has on its surface an uneven portion for scattering light, said uneven portion being 1  $\mu\text{m}$  or less in height.

14. A device according to claim 12, wherein said light reflection film is flat and an uneven portion of said light reflection film is 0.3  $\mu\text{m}$  or less in height.

15. A device according to claim 12, further comprising an interlayer insulating film under said texture body, said interlayer insulating film being flat with an uneven portion of said interlayer insulating film being 0.3  $\mu\text{m}$  or less in height.

16. A device according to claim 12, wherein said first electrode is formed of a material selected from the group consisting of aluminum, a material with a main component thereof being aluminum, silver, and a material with a main component thereof being silver.

17. A device according to claim 12, wherein said liquid crystal material is selected from the group consisting of a nematic, a smectic, and a cholesteric liquid crystal materials.

18. A device according to claim 12, wherein, in the case where the film thickness and the refractive index of said texture body are  $d_1$

and  $n_1$ , respectively, the film thickness  $d_1$  is adjusted to satisfy  $300 \text{ nm} \leq \lambda \leq 800 \text{ nm}$  (wherein  $\lambda = 4n_1d_1$ ) in a part of or substantially all over said texture body.

5 19. A device according to claim 12, wherein, in the case where the film thickness and the refractive index of said light reflection film are  $d_2$  and  $n_2$ , respectively, the film thickness  $d_2$  is adjusted to satisfy  $300 \text{ nm} \leq \lambda \leq 800 \text{ nm}$  (wherein  $\lambda = 4n_2d_2$ ) in a part of or substantially all over said light reflection film.

10 20. A device according to claim 12, wherein said texture body is formed of a material selected from the group consisting of  $\text{SiO}_2$ ,  $\text{MgF}_2$ ,  $\text{Na}_3\text{AlF}_6$ , an acrylic resin, and polyimide.

15 21. A device according to claim 12, wherein said light reflection film is formed of a material selected from the group consisting of  $\text{TiO}_2$ ,  $\text{ZrO}_2$ ,  $\text{Ta}_2\text{O}_5$ ,  $\text{ZnS}$ ,  $\text{ZnSe}$ ,  $\text{ZnTe}$ ,  $\text{Si}$ ,  $\text{Ge}$ ,  $\text{Y}_2\text{O}_3$ ,  $\text{Al}_2\text{O}_3$ , and Indium Tin Oxide.

20 22. A device according to claim 12, wherein said electrooptical display device is a reflection type display device.

23. An electrooptical display device comprising:  
a first substrate having an insulating surface;  
at least one thin film transistor on said insulating surface;  
25 a first electrode formed over and connected to said thin film transistor,  
a texture body on said first electrode, said texture body formed of a material having a refractive index of 1.7 or less, and  
a light reflection film on said texture body, said light  
30 reflection film formed of a material having a higher refractive index than that of said texture body,  
a second substrate formed of a transparent substrate, said

second substrate having a second electrode formed of a transparent material thereon; and

a liquid crystal material between said first and second substrates.

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24. A device according to claim 23, wherein said texture body has on its surface an uneven portion for scattering light, said uneven portion being 1  $\mu\text{m}$  or less in height.

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25. A device according to claim 23, wherein said light reflection film is flat and an uneven portion of said light reflection film is 0.3  $\mu\text{m}$  or less in height.

26. A device according to claim 23, further comprising an interlayer insulating film between said thin film transistor and said texture body, said interlayer insulating film being flat with an uneven portion of said interlayer insulating film being 0.3  $\mu\text{m}$  or less in height.

27. A device according to claim 23, wherein said first electrode is formed of a material selected from the group consisting of aluminum, a material with a main component thereof being aluminum, silver, and a material with a main component thereof being silver.

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28. A device according to claim 23, wherein said liquid crystal material is selected from the group consisting of a nematic, a smectic, and a cholesteric liquid crystal materials.

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29. A device according to claim 23, wherein, in the case where the film thickness and the refractive index of said texture body are  $d_1$  and  $n_1$ , respectively, the film thickness  $d_1$  is adjusted to satisfy  $300 \text{ nm} \leq \lambda \leq 800 \text{ nm}$  (wherein  $\lambda = 4n_1d_1$ ) in a part of or substantially all

over said texture body.

30. A device according to claim 23, wherein, in the case where the film thickness and the refractive index of said light reflection film are  $d_2$  and  $n_2$ , respectively, the film thickness  $d_2$  is adjusted to satisfy  
5  $300 \text{ nm} \leq \lambda \leq 800 \text{ nm}$  (wherein  $\lambda = 4n_2d_2$ ) in a part of or substantially all over said light reflection film.

31. A device according to claim 23, wherein said texture body is  
10 formed of a material selected from the group consisting of  $\text{SiO}_2$ ,  $\text{MgF}_2$ ,  $\text{Na}_3\text{AlF}_6$ , an acrylic resin, and polyimide.

32. A device according to claim 23, wherein said light reflection film is formed of a material selected from the group consisting of  $\text{TiO}_2$ ,  $\text{ZrO}_2$ ,  $\text{Ta}_2\text{O}_5$ ,  $\text{ZnS}$ ,  $\text{ZnSe}$ ,  $\text{ZnTe}$ ,  $\text{Si}$ ,  $\text{Ge}$ ,  $\text{Y}_2\text{O}_3$ ,  $\text{Al}_2\text{O}_3$ , and Indium Tin Oxide.  
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33. A device according to claim 23, wherein said electrooptical display device is a reflection type display device.

34. A device according to claim 23, wherein said thin film transistor is a top gate type thin film transistor.  
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35. A device according to claim 23, wherein said thin film transistor is a bottom gate type thin film transistor.